

**EMERGENCIES NOTE:
NOT ALL EPS HERE; CHECK POH**

ENGINE FIRE DURING START

Starter CONTINUE CRANKING
Mixture FULL LEAN/CUTOFF
Throttle OPEN
Fuel Pump OFF
Fuel Selector OFF
Master & Mags OFF
EVACUATE / FIRE EXTINGUISHER

**ENGINE POWER LOSS DURING
TAKEOFF IF CANNOT ABORT**

MAINTAIN AIRCRAFT CONTROL
Maintain Safe Airspeed 73 KIAS
Fuel Selector OFF
Mixture FULL LEAN/CUTOFF
Flaps AS REQUIRED
Master & Mags OFF
UNLATCH DOOR PROTECT BODY

**POWER LOSS IN FLIGHT WITH
SUFFICIENT ALTITUDE**

Trim Best Glide Speed 73 KIAS
PICK LANDING SITE, NOTE WIND
Fuel Selector SWITCH TANKS
Fuel Pump ON
Carb Heat ON
Mixture FULL RICH
Engine Gauges Check for Cause of Loss
Fuel Primer CHECK LOCKED
Magnetos CHECK BOTH/L/R
If power restored
Carb Heat OFF
Fuel Pump OFF

If power not restored, prepare for

POWER OFF LANDING

Trim Best Glide Speed 73 KIAS
PICK LANDING SITE, NOTE WIND
Declare emergency SQUAWK 7700
ELT ON
Short Final 63 KIAS
Flaps FULL FLAPS
Seat Belt/Harness TIGHT
Mixture FULL LEAN/CUTOFF
Fuel Selector OFF
Master & Mags OFF
UNLATCH DOOR PROTECT BODY

ELECTRICAL FIRE IN FLIGHT

Master Switch, Cabin Heat OFF
Vents OPEN
Land As Soon As Possible/Practicable

ENGINE FIRE IN FLIGHT

Fuel Selector, Fuel Pump OFF
Throttle IDLE/CLOSED
Mixture FULL LEAN/CUTOFF
Cabin Heat/Defroster OFF
INITIATE EMERGENCY DESCENT
Flaps FULL (40°)
Airspeed 103 KIAS (top of white arc)
Bank 30-45°
**RECOVER AS APPROPRIATE FOR
POWER-OFF LANDING**

ENGINE ROUGHNESS

Carb Heat ON
If still rough after ONE minute:
Carb Heat OFF
Mixture ADJUST to SMOOTHNESS
Fuel Pump ON
Fuel Selector SWITCH TANKS
Engine Gauges CHECK
Magnetos L, R, THEN BOTH
Land As Soon As Practicable

LOSS OF FUEL PRESSURE

Fuel Pump ON
Fuel Selector SWITCH TANKS

LOSS OIL PRESS/HIGH OIL TEMP

Land As Soon As Possible
Prepare for Power Off Landing

ELECTRICAL FAILURES

Annunciator Light CHECK GAUGE/LIGHT
ALT Switch OFF
Reduce Electric Loads CHECK CBs
Land As Soon As Practicable

AIRSPEEDS

V_{NE} 160 KIAS
V_{NO} 126 KIAS
V_A (2325#/1530#) 111/88 KIAS
V_{FE} 103 KIAS
V_S 50 KIAS
V_{SO} 44 KIAS
V_Y 79 KIAS
V_X flaps 25°/0° 55/63 KIAS
V_R 55 KIAS
Climb Enroute 87 KIAS
Best Glide (2325#) 73 KIAS

SPECS

Usable Fuel Tabs/Full 34 G/48 G
Oil 8 QTs max; 6 QTs recommended
Tire Pressure 30 PSI Nose; 24 PSI Main
Taxi Fuel 1.0 Gallon
Max Demonstrated X-Wind 17 KTS
Cruise 3,000'@75% 2500 RPM/108 KTS
Cruise GPH@75% (leaned) 9.4 GPH

LIGHT SIGNALS IN FLIGHT

Steady Green Cleared to Land
Flashing Green Return for Landing
Steady Red Yield & Continue Circling
Flashing Red Unsafe - Do Not Land
Red/Green Alt Use Extreme Caution

LIGHT SIGNALS ON GROUND

Steady Green Cleared to Take Off
Flashing Green Cleared to Taxi
Steady Red Stop
Flashing Red Taxi Clear of Runway in Use
Flashing White Taxi to Starting Point
Red/Green Alt Use Extreme Caution

ALT AIRPORTS / 0 WIND

Bedford to Lawrence KBED – KLWM
042°/17 NM ATIS: 126.75 Tower: 119.25
Bedford to Nashua KBED – KASH
348°/21 NM ATIS: 125.1 Tower: 133.2
Bedford to Norwood KBED – KOWD
179°/18 NM ATIS: 119.95 Tower: 126.0
Caution: Needham Antennas 1,500' MSL
Bedford to Fitchburg KBED – KFIT
300°/21 NM
ASOS: 135.75 PCL: 123.0 CTAF: 122.7

CROSSWIND TABLE

Angle	5 kt	10 kt	15 kt	20 kt	25 kt	30 kt
0°	0	0	0	0	0	0
10°	1	2	3	3	4	5
20°	2	3	5	7	9	10
30°	3	5	8	10	13	15
40°	3	6	10	13	16	19
50°	4	8	11	15	19	23
60°	4	9	13	17	22	26
70°	5	9	14	19	23	28
80°	5	10	15	20	25	30
90°	5	10	15	20	25	30

SAFETY CK PREFLIGHT INTERIOR

Magnetos.....OFF/KEYS OUT
 Mixture.....FULL LEAN/CUTOFF
 Throttle.....CLOSED
 Hobbs & TachRECORD
 Documents (AROW)CHECK
 Flight ControlsRELEASE
 Avionics/Radio MasterOFF
 Electrical SwitchesOFF
 Master Switch (Prop Clear).....ON
 Fuel GaugesCHECK
 Annunciator panelTEST
 Exterior Lights & Pitot Heat.....ON & CHECK
 Stall hornCHECK
 Exterior Lights & Pitot Heat.....OFF
 Master Switch.....OFF
 Pitot & Static DrainsCHECK
 Flight Controls & Trim.....CHECK
 Windows.....CLEAN
 Flaps.....EXTEND

PREFLIGHT-EXTERIOR

Flight controls.....CHECK & CLEAR
 Tie down/chocks.....REMOVE
 Fuel Quantity/QualityCHECK
 Tire pressure.....30 PSI Nose, 24 PSI Mains
 Gear & Brakes.....CHECK
 Engine/Oil/Belt/Propeller.....CHECK
 Inlets/Pitot Static.....CLEAR
 Antennas.....CHECK
 Baggage AreaSECURE
 Baggage DoorLATCHED
 Final Walk AroundCHECK

BEFORE ENGINE START

Flaps.....RETRACT
 Passenger Brief (& Rally Point) ... COMPLETE
 Seat & Seat Belts/Harness.....SECURE
 Fuel SelectorLOWER TANK
 Circuit BreakersCHECK
 Strobes/Anti-Collision LightsON
 Carb Heat.....OFF
 BrakesSET & HOLD

ENGINE START

MixtureRICH
 Throttle.....¼" COLD, ½" HOT
 PrimerAS REQUIRED & SECURED
 Master & Alt SwitchesON
 Fuel Pump.....ON
 Propeller Area.....CLEAR
 Starter.....ENGAGE
 If engine does not start within 10 secs,
 prime and repeat starting procedure .
 Throttle.....800 RPM (NOT > 1,000 RPM)
 Oil Pressure.....CHECK
 Fuel Pump.....OFF
 MixtureAS REQUIRED

PRE TAXI / TAXI

Avionics / Radio MasterON
 ATIS/AWOS.....CHECK
 Altimeter/Radios/XPDR.....SET
 Flight InstrumentsSET & CHECK
 Taxi Light/LightsON/AS REQUIRED
 Brakes.....CHECK
 SteeringCHECK

ENGINE RUNUP

Brakes.....SET & HOLD
 Oil TempIN LIMITS
 Fuel SelectorOTHER TANK
 MixtureRICH
 Throttle.....2,000 RPM
 Mags (drop 175, diff 50)CHECK
 Vacuum (4.9 – 5.1").....CHECK
 Oil Temp & Pressure.....IN LIMITS
 Fuel PressureIN LIMITS
 Annunciator Panel.....TEST
 Load MeterCHARGING
 Carb Heat.....ON/RPM DROP/NO RISE
 Throttle (min 500 RPM).....RETARD
 Carb Heat.....OFF
 Throttle.....1,000 RPM

BEFORE TAKEOFF

Primer.....IN & LOCKED
 Fuel Pump & Landing Light.....ON
 Pitot HeatAS REQUIRED
 Flight InstrumentsCHECK
 Trim (Elev + Rudder)CHECK
 Flight Controls/FlapsCHECK
 Seat & Seat Belts/Harness.....SECURE
 Door & WindowLATCHED
 Takeoff BriefingCOMPLETE

TAKEOFF

Mixture.....FULL RICH
 Throttle.....FULL
 PowerCHECK
 Engine GaugesCHECK
 Airspeed Indicator.....CHECK
 Rotate (0° Flaps)55 KIAS
 Rotate Short/Soft (25° Flaps)52 KIAS

CLIMB

FlapsRetract at safe speed
 Airspeed cruise climb87 KIAS
 Engine GaugesCHECK
 Fuel Pump.....OFF at Safe Alt

CRUISE

Throttle.....AS REQUIRED
 Mixture.....AS REQUIRED
 FuelPROPER TANK
 Engine GaugesCHECK

WARNING:
 Improper leaning procedures will
 greatly reduce endurance

DESCENT – NORMAL*

ATIS/AWOS.....CHECK
 Altimeter/Radios/Flight InstrumentsSET
 Throttle & Airspeed2,000/110 KIAS
 Mixture.....RICH
 Carb HeatON if required
 * Settings differ from Piper's checklist

DESCENT – POWER OFF

ATIS/AWOS.....CHECK
 Altimeter/Radios/Flight InstrumentsSET
 Carb HeatON if required
 Throttle & Airspeed.....Closed/As required
 Mixture.....RICH
 ThrottleVerify every 30 seconds

APPROACH & LANDING

Seat & Seat Belts/Harness.....SECURE
 Fuel Pump & Landing Light.....ON
 Mixture.....RICH
 Fuel.....PROPER TANK
 FlapsAS REQUIRED (103 KIAS Max)
 Trim to airspeed70 KIAS
 Final approach (flaps 40°)63 KIAS

AFTER LANDING

FlapsRETRACT
 Fuel PumpOFF
 Carb Heat & Pitot Heat.....OFF
 Mixture.....LEAN
 TrimNEUTRAL

SHUTDOWN & SECURING

Avionics/Radio MasterOFF
 ThrottleIDLE
 MagnetosCHECK FOR GROUND
 ELTConfirm OFF
 Mixture.....FULL LEAN/CUTOFF
 MagnetosOFF, KEY OUT
 Master & Alt Switches.....OFF
 Lights/Electric Switches.....OFF
 Flight ControlsSECURE
 Hobbs & TachRECORD
 Tie Downs.....SECURE
 Door & WindowSECURE
 Post Flight Walkaround.....COMPLETE

BED FREQUENCIES & PHONE #

ATIS124.6
 GROUND.....121.7
 TOWER118.5
 BOS APP (inc. clearance w/tower clsd)124.4
 CLEARANCE121.85
 ILS111.15
 VOT110.0
 Aero Club OPS781-225-5849
 Aero Club MX781-225-5851
 Tower781-862-1592